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# **The impact of South African supermarkets on agricultural and industrial development in the Southern African Development Community**

by

**Rosemary Akhungu Emongor**

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## DECLARATION

I declare that the thesis, which I hereby submit for the degree of Doctor of Philosophy in Agricultural Economics at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

SIGNATURE: ..... DATE: .....

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*The Lord is my shepherd; I shall not want.*

*He makes me to lie down in green pastures: He leads me besides the still waters.*

*He restores my soul: He leads me in the paths of righteousness for his name's sake.*

*Yea, though I walk through the valley of the shadow of death, I will fear no evil:*

*For you are with me; your rod and your staff they comfort me.*

*You prepare a table before me in the presence of my enemies:*

*You anoint my head with oil; my cup runs over.*

*Surely goodness and mercy shall follow me all the days of my life: and I shall dwell in the house of the Lord for ever.*

God bless you all.

# **The impact of South African supermarkets on agricultural and industrial development in the Southern African Development Community**

By

**Rosemary Akhungu Emongor**

**Degree:** PhD (Agricultural Economics)

**Department:** Agricultural Economics, Extension and Rural Development

**Promoter:** Professor Johann F. Kirsten

## **ABSTRACT**

Supermarkets have become important in food retail in both developed and developing countries. Supermarkets in developed countries are expanding to developing countries such as Latin America and Asia resulting in transformation of the agro-food systems. As elsewhere in the world, supermarkets are also expanding rapidly in Africa. The growth and expansion of supermarkets is mainly spearheaded by South African supermarkets and has been facilitated by trade liberalization, increased economic growth, positive political changes, regional integration arrangements, increased urbanisation, increased per capita income and middle class population groups and liberalization of foreign direct investment. The increased foreign direct investment (FDI) by South African supermarkets into SADC and the rest of Africa may be impacting on firms, households and the economy in the host nations in various ways. As much as the FDI by South African firms bring the much-needed capital for development, the impact of South Africa supermarkets in SADC and the rest of Africa is least understood.

The impact of the expansion of South African supermarkets in the retail sector in other African countries has not been elucidated. Therefore, the objective of this study was to determine the impact of supermarkets on agricultural and industrial (mainly the food

processing and manufacturing sector) development in SADC by examining their sourcing and procurement practices. From the identified gaps in literature the study attempts to answer the following questions: what is the extent of growth and expansion of South African supermarkets in case study countries; what are the nature of sourcing and procurement practices and the factors influencing the choice of procurement systems; what are the impacts of these sourcing and procurement practices on farmers and food processors in case-study countries and do farmers gain by participating in the supermarkets FFV supply chain in case-study countries.

A case study of three countries (Botswana, Namibia and Zambia) and two supply chains were studied. The study used qualitative and quantitative methods in collecting data in order to elucidate the impacts of these supermarkets on agricultural and industrial (food processing) development in the case study countries. A survey of South African and local chain supermarkets, local shops, food processors, small-scale farmers supplying fresh fruit and vegetables (FFV) to chain supermarkets and the traditional FFV markets was undertaken in the case-study countries in 2004, 2005 and 2007 using questionnaires and checklists. The survey data were augmented with key informant and focus group discussions and secondary data. The analytical methods used included descriptive analysis, non-parametric statistics and a two-step treatment regression analysis model. The conceptual framework for analysing the sourcing/procurement practices of supermarkets and a model to show how impacts in host countries could occur as a result of sourcing decisions were developed and used in the study.

The results of the survey of products sold in supermarkets and local shops showed that 80% of all processed food products are sourced from South Africa. About 100% of temperate fruit and 70-100% tropical fruit are sourced from South Africa in the case-study countries. About 80% of fresh vegetables are sourced from farmers in Zambia and about 80 % are sourced from South Africa for Botswana and Namibia. The results also revealed that supermarkets used a mixture of procurement systems for FFV and processed food products. These systems included use of specialised sourcing and procurement companies; direct delivery of FFV to individual supermarket stores;

specialised FFV wholesalers; distribution centres; outsourcing. Using the structured questionnaire supermarket managers were asked the criteria used in sourcing the selected products. The results of the parametric analysis of the responses showed that price, volume, quality and trust were the most important attributes considered respectively.

In order to estimate the impact of supermarkets on farmers a household survey was carried out using a structured questionnaire. There were noticeable differences in resources between farmers who supply to the supermarkets and those who supply to the traditional markets. Factors that influence small-scale farmers' participation in the supermarkets supply chain were identified from the results of the estimated probit model. The results of the two-step treatment regression model showed that participation in the supermarkets channel had a positive impact on small-scale farmers' income. Mean comparison of income between the two groups of farmers showed that farmers who supplied fresh vegetables to chain supermarkets had a significantly higher income compared to those who supplied to traditional markets in Zambia. This finding confirms hypothesis 2 of the study. The study did not explore causality due to insufficient data on lagged assets.

Impacts on the food-processing sector were deduced by carrying out a survey of food processing firms in case-study countries. The goal was to determine the type of firms that access supermarkets supply chain for selected products and determine other channels used for marketing of the products. About 75% of firms started their operations in the 1990s. This period also coincided with rapid supermarket expansion in case-study countries. A symbiotic relationship exists between supermarkets and large processing firms in the case-study countries. There was no evidence to show that supermarkets have caused firms to increase in size or that supermarkets prevented entry of agro-processors in the food processing industry. Small-scale processing firms do not access supermarket supply chains in case-study countries and sell their products through the traditional channels such as small shops and wholesales. Various constraints still prohibit small-scale firms from accessing supermarkets such as lack of capital and lack of finances.



From the results of the models and focus group discussions the study concluded that small-scale farmers who meet supermarkets sourcing/procurement requirements were able to access the FFV supply chain of the South African chain supermarkets. Those who did not meet the supermarket requirements who are the majority small-scale farmers and food processors were excluded. Those small-scale farmers who were able to supply to supermarkets earned significantly higher income compared to those who supply to the traditional markets. The study also concluded that membership in a farmers organization does not increase the chances of a farmers accessing and supplying to supermarkets. There is need to re-evaluate the farmer organizations that are being formed to ensure that the organizations assist farmers in accessing supermarkets FFV supply chain and marketing of produce in general. The study also concluded that the traditional markets are still important in case-study countries. These markets need to be improved and developed as small-scale farmers and food processors easily assess them. The study recommended that a holistic analysis of supermarket impacts in the region using general equilibrium type of models is needed, ways to ensure small-scale farmers and processors participation in supermarket FFV supply chain should be determined and more research on the practices of supermarkets as oligopsonists in the region should be carried out.

The study was able to document the extent of growth and expansion of supermarkets in case-study countries and as such contributed to literature by describing the sourcing and procurement practices and factors that influence supermarket sourcing and procurement decisions in case-study countries, the study contributed to literature by identifying the type of small-scale farmers who access chain supermarkets in case-study countries, the study contributed by identifying the factors that influence farmers decisions to supply FFV markets and the study showed that supermarkets involvement in the FFV and dairy supply chains in case-study countries had a positive impact in these sectors.

**Key words:** supermarkets, supply chain, SADC, sourcing/procurement, impact



## TABLE OF CONTENTS

DECLARATION .....	ii
ACKNOWLEDGMENTS .....	iii
ABSTRACT .....	vi
LIST OF FIGURES .....	xvii
ABBREVIATIONS AND ACRONYMS .....	xviii
CHAPTER 1 .....	1
INTRODUCTION .....	1
1.1 Background .....	1
1.2 The problem statement .....	10
1.3 Gaps in the literature and research questions .....	12
1.3.1 Gaps in the literature .....	12
1.3.2 Choice of products .....	15
1.3.3 Research questions .....	16
1.4 Hypotheses .....	16
1.5 Research methodology .....	17
1.5.1 Study area .....	17
1.5.2 Selection of study countries .....	21
1.5.3 Research design .....	21
1.5.4 Data and data sources .....	21
1.5.6 Analytical methods .....	27
1.7 Organisation of the thesis .....	27
CHAPTER 2 .....	29
THE GROWTH AND EXPANSION OF SUPERMARKETS AND THEIR IMPACT ON THE FOOD SUPPLY SYSTEMS IN DEVELOPING COUNTRIES .....	29
2.1 Introduction .....	29
2.2 An overview of supermarket expansion in developing countries .....	29
2.2.1 Evolution of food retail markets in developing countries .....	31
2.2.2 Evolution of supermarkets' procurement and inventory-control practices .....	37
2.3 Supermarket involvement in food retailing in Africa .....	40
2.4 Growth and expansion of supermarkets in South Africa .....	43
2.5 Growth and expansion of South African supermarkets in SADC countries .....	45
2.5.1 Zambia .....	47
2.5.2 Namibia .....	49
2.5.3 Botswana .....	54
2.5.4 Formats of South African supermarket expansion in SADC countries .....	57
2.6 A historical overview of supermarket growth in SADC .....	58
2.6.1 OK Bazaars .....	58
2.6.2 Checkers .....	59
2.6.3 Shoprite Holdings Group .....	59
2.6.4 Pick 'n Pay .....	62
2.6.5 Spar .....	63
2.6.6 Woolworths .....	64
2.7 Retail sector supply chains .....	65
2.8 Drivers of supermarket growth and diffusion in Africa and the SADC .....	66
2.8.1 Population growth and urbanisation .....	66



2.8.2 Globalisation, market and trade liberalisation policies.....	68
2.8.3 Information, communication and technological change.....	72
2.8.4 Domestic policies.....	73
2.9 Issues related to the expansion of South African supermarkets in SADC.....	73
2.9.1 Importance of South African foreign direct investment in Africa.....	73
2.9.2 Potential exclusion of small producers/processors.....	74
2.9.3 Rapid change of supermarkets' procurement systems.....	74
2.10 Trade impacts of supermarkets in SADC.....	76
2.11 Summary.....	78
CHAPTER 3.....	80
A CONCEPTUAL AND THEORETICAL FRAMEWORK.....	80
3.1 Introduction.....	80
3.2 Conceptual framework for analysing procurement practices of supermarkets.....	80
3.2.1 Environmental and policy factors.....	83
3.2.2 Organisational factors.....	84
3.2.3 Farmer/processor factors.....	86
3.3 Constructs on how the impact of supermarkets in host countries may occur.....	87
3.3.1 Impacts when supermarkets source from South Africa.....	88
3.3.2 Impact when supermarkets procure from host countries.....	89
3.4 Perceived and/or measurable impacts of supermarkets in SADC countries.....	95
3.5 Theoretical models to estimate the impact of supermarkets on farmers, the agriculture and manufacturing industry in the SADC.....	97
3.5.1 A model to estimate the determinants of farmers' choice of marketing channels and the resultant impact on farmers' income.....	97
3.5.2 A heuristic model to estimate the determinants of supermarkets' choice of procurement system.....	99
3.6 Summary.....	104
CHAPTER 4.....	105
SOURCING AND PROCUREMENT PRACTICES OF SUPERMARKETS IN SELECTED SADC COUNTRIES.....	105
4.1 Introduction.....	105
4.2 Products sold in supermarkets/local shops in Namibia, Botswana and Zambia...	105
4.3 Procurement practices of supermarkets in case-study countries.....	108
4.3.1 Zambia.....	108
4.3.2 Botswana.....	112
4.3.3 Namibia.....	115
4.4 Comparison of the procurement practices in the case-study countries.....	119
4.5 Procurement policies of supermarkets in case-study countries.....	120
4.6 Supermarkets' sourcing and procurement criteria for fresh fruit and vegetables and processed products in case-study countries.....	122
4.7 The role of public policy and its influence on trade in the selected products.....	125
4.8 Summary.....	126
CHAPTER 5.....	127
PROFILES OF FARMERS SUPPLYING TO SUPERMARKETS AND TRADITIONAL MARKETS IN BOTSWANA AND ZAMBIA.....	127
5.1 Introduction.....	127



5.2 Profiles of farmers that supply FFV to the two market channels in Zambia .....	127
5.2.1 Entry of sampled farmers in FFV production in Zambia.....	128
5.2.2 Resource endowment of sample farmers in Zambia.....	129
5.2.3 Household characteristics .....	134
5.2.4 Farmers' ability to meet supermarket conditions.....	140
5.2.5 Mean comparisons of farmers supplying to supermarkets and traditional market channels .....	141
5.3 Profiles of farmers that supply FFV to the two market channels in Botswana....	144
5.3.1 Entry of sampled farmers into production of FFV in Botswana.....	145
5.3.2 Resource endowment of farmers in Botswana.....	146
5.3.3 Household characteristics .....	148
5.3.4 Farmers' ability to meet supermarket conditions in Botswana.....	152
5.4 Summary .....	154
CHAPTER 6 .....	155
THE DETERMINANTS AND IMPACT OF FARMERS' PARTICIPATION IN THE SUPERMARKETS FFV SUPPLY CHAIN IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY .....	155
6.1 Introduction.....	155
6.2 Estimating the model .....	155
6.2.1 Two-step impact estimation procedure.....	156
6.2.2 Variables in the model .....	157
6.2.3 Hypothesis.....	161
6.3 Decision to supply vegetables to supermarkets or the traditional market channel	162
6.4 The impact of farmers' participation in the supermarket FFV supply chain on household income.....	164
6.5 Hypothesis testing.....	166
Caveat .....	167
6.6 Summary .....	168
CHAPTER 7 .....	170
SUPERMARKETS' IMPACT ON AGRICULTURE, MANUFACTURING/ FOOD PROCESSING AND TRADE IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY .....	170
7.1 Introduction.....	170
7.2 Impact of supermarkets on the food-processing sector.....	171
7.3 Impact of supermarkets' involvement in the dairy sector in Botswana, Namibia and Zambia .....	172
7.3.1 Increase in fresh milk output.....	173
7.3.2 Improvement in milk quality .....	175
7.3.3 Increased dairy product exports and imports .....	177
7.4 Impact of supermarket activity on the fresh fruit and vegetables sector .....	180
7.4.1 Increased farm output and household income .....	180
7.4.2 Increased input use.....	182
7.4.3 Increased availability of FFV imports. ....	183
7.5 Comparison of perceived impact of supermarkets on the FFV sector.....	187
7.6 Trade flows in the SADC.....	188
7.6.1 Trade flows between South Africa and the case-study countries .....	188



7.6.2 Trend in the share of South African exports in imports of SADC countries.	190
7.7 Summary .....	193
CHAPTER 8 .....	194
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	194
8.1 Summary .....	194
8.2 Conclusions.....	203
8.2.1 Supermarkets' growth and expansion in the SADC .....	203
8.2.2 Sourcing and procurement practices.....	205
8.2.3 Impact of supermarkets on the FFV and dairy sectors .....	207
8.2.4 Impact on trade .....	209
8.2.5 The Role/direction of public policy .....	209
8.3 Recommendations.....	210
8.3.1 Inclusion of small-scale farmers and processors in markets.....	210
8.3.2 Impact of supermarkets on agricultural and industrial development in SADC region.....	212
8.3.3 Recommendation for further research .....	213
REFERENCES .....	214
APPENDICES .....	234
Appendix 1: List of people interviewed.....	234
Appendix 2: Checklists .....	238
Appendix 3: Product lists.....	240
Appendix 4: Supermarkets' questionnaire.....	241
Appendix 5: The agro-industry (food processors) questionnaire .....	246
Appendix 6: Farmer questionnaire.....	250

## LIST OF TABLES

Table 1.1: International and local companies operating in the South African agrofood industry .....	6
Table 1.2: Basic population and economic indicators of SADC economies .....	20
Table 1.3: Distribution of farmers and sample size in Botswana .....	24
Table 2.1: Market share (%) and retail sales of various South African supermarkets.....	44
Table 2.2: Type and number of South African supermarkets in SADC (2007) .....	46
Table 2.3 Share of food in total retail sales 2007 .....	47
Table 2.4: Supermarkets (selling food products) in Zambia.....	48
Table 2.5: Shoprite supermarkets in Zambia .....	49
Table 2.6: Supermarkets (selling food products) in Windhoek, Namibia .....	51
Table 2.7: The top five supermarkets in Namibia.....	51
Table 2.8: Shoprite supermarkets in Namibia.....	53
Table 2.9: Spar supermarkets in Namibia.....	53
Table 2.10: Supermarkets in Botswana .....	55
Table 2.11: Spar supermarkets in Botswana.....	57
Table 2.12: Growth and development of OK Bazaars in South Africa .....	58
Table 2.13: Type and number of Shoprite Holdings in RSA, the SADC and other countries (2007).....	61
Table 2.14: Growth of the Pick 'n Pay retail supermarket chain in SA and SADC countries.....	62
Table 2.15: Type and number of Pick 'n Pay stores in SA and SADC (2007).....	63
Table 2.16: Woolworths stores in Africa.....	64
Table 2.17: Total population, urban population and urbanisation rates in SADC countries 1981-2003 .....	68
Table 3.1: Summary of quantifiable supermarket impacts .....	96
Table 4.1: Product categories found on supermarket shelves/local shops and their sources .....	106
Table 4.2: Comparison of maize-flour prices in Botswana supermarkets .....	115
Table 4.3: Comparison of procurement practices among supermarkets in Botswana, Namibia and Zambia.....	119
Table 4.4: Comparisons of retail prices in the SADC region (June-November 2004) ...	121
Table 4.5: Comparisons of mean retail prices in chain supermarkets and local shops...	122
Table 4.6: The important criteria used by supermarkets in sourcing and procurement of FFV and processed food products.....	124
Table 5.1: Entry of small-scale farmers into production of FFV in Zambia .....	128
Table 5.2: Year when small-scale farmers started selling to supermarkets in Zambia...	129
Table 5.3: Types of land ownership among sampled farmers in Zambia .....	129
Table 5.4: Farm sizes of FFV producers in Zambia .....	130
Table 5.5: Comparison of total land size, land under FFV 5 years before and after supplying FFV to various channel in Zambia .....	131
Table 5.6 Ownership of vehicles among sampled farmers in Zambia.....	131
Table 5.7: Types of irrigation systems owned by farmers in Zambia .....	133
Table 5.8: Ownership of sorting/packaging shades in Zambia.....	134
Table 5.9: Household size among sampled farmers in Zambia .....	135



Table 5.10: Gender of household heads in Zambia .....	136
Table 5.11: Education levels of household heads in Zambia.....	136
Table 5.12: Types of off-farm sources of income for farmers in Zambia .....	137
Table 5.13: Input costs of farmers in Zambia .....	138
Table 5.14: Wealth ranking of interviewed farmers in Zambia.....	139
Table 5.15: Mean distance (km) from farm to market or urban centre.....	139
Table 5.16: Number of days before receiving payment from supermarkets.....	141
Table 5.17: Farmers who supply supermarkets and belong to a farmers' group in Zambia.....	141
Table 5.18: Mean comparison of sampled farmers supplying FFV to supermarkets and the traditional market channels in Zambia .....	144
Table 5.19: Entry of small-scale farmers into production of FFV in Botswana.....	145
Table 5.20: Size of land owned by farmers involved in FFV production in Botswana..	146
Table 5.21: Ownership of vehicles among sampled farmers in Botswana .....	147
Table 5.22: Types of irrigation systems owned by sampled farmers in Botswana.....	147
Table 5.23: On-farm processing of FFV by sampled farmers in Botswana .....	148
Table 5.24: Education levels of household heads of sampled farmers in Botswana .....	149
Table 5.25: Types of off-farm sources of income for farmers in Botswana.....	150
Table 5.26: Input costs of sampled farmers in Botswana (pula).....	150
Table 5.27: Wealth ranking of interviewed farmers in Botswana .....	151
Table 5.28: Mean distance from farm to market or urban centre .....	151
Table 5.29: Nature of contracts between supermarkets and farmers in Gaborone Botswana.....	152
Table 5.30: Number of days before receiving payment.....	153
Table 6.1: Dependent and independent variables used in the model.....	158
Table 6.2: Hypothesized relationship of participation with income .....	161
Table 6.3: Factors that influence farmers' participation in the supermarket FFV supply chain, probit results.....	163
Table 6.4: Impact of farmers' participation in supermarket FFV supply chain, regression results.....	165
Table 6.5: Mean comparison of value of sales (proxy for income) of farmers supplying to supermarkets and those supplying to traditional markets in Botswana and Zambia.....	167
Table 7.1: Profile of food-processing companies interviewed in Botswana, Namibia and Zambia .....	172
Table 7.2: Share of sampled processors output (%) sold through supermarkets and traditional channels.....	171
Table 7.3: Milk production and consumption statistics in Zambia (1998 – 2003).....	174
Table 7.4: Milk grades and producer pricing in Botswana .....	176
Table 7.5: Imports and exports of dairy products in Zambia from 1998 to 2003 .....	177
Table 7.6: Local production and fresh milk imports (from SA) in Botswana (2003) ....	178
Table 7.7: Namibian imports globally, the SADC and South Africa (1999 to 2003)....	180
Table 7.8: Percentage of farmers who have increased output and income in Zambia....	181
Table 7.9: Input use on farms producing FFV in Zambia.....	182
Table 7.10: Input use on farms producing FFV in Botswana .....	183
Table 7.11: Value of FFV exported by South Africa to Zambia (2000 to 2005) .....	184



Table 7.12: Local production and importation of FFV in Botswana (2000 to 2002) .....	185
Table 7.13: Consumption, imports and local production of horticultural produce in Namibia (2003).....	186
Table 7.14: Comparison of impacts in case countries .....	188
Table 7.15: Trade between RSA the case countries (Botswana, Namibia and Zambia) (1992 to 2003).....	190
Table 7.16: Share of South Africa's exports in the imports of SADC countries (1993 - 2004).....	191
Appendix 7: Calculation of z for frozen vegetables in Botswana .....	258
Appendix 8: Sampled supermarkets in Botswana, Namibia, Zambia and South Africa	259





## LIST OF FIGURES

Figure 1.1: Map of SADC highlighting the case study countries .....	18
Figure 2.1: Early food-marketing channels in developing countries in the 1960s and 1970s.....	32
Figure 2.2: The agricultural supply chain in developing countries since the mid 1990s.....	33
Figure 2.3: Evolution of supermarket procurement and inventory-control systems in developed/developing countries.....	38
Figure 3.1: Conceptual model explaining supermarkets' procurement decision.....	82
Figure 3.2: Conceptual model of impact of South African supermarkets in SADC countries.....	88
Figure 4.1: Criteria used by supermarkets to source FFV and processed foods.....	123
Box 2: Foodcorp in Zambia .....	181
Figure 7.4: Trend of the share of South African exports in selected SADC countries' imports (1993-2004).....	192
<b>Boxes</b>	
Box 1: Specialised FFV companies and wholesalers .....	34
Box 2: Foodcorp in Zambia .....	181

## ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of variance
CMA	Common monetary area
COMESA	Common Market for Eastern and Southern Africa
DBSA	Development Bank of Southern Africa
DC	Distribution centre
DTI	Department of trade and industry
ESRF	Economic and Social Research Foundation
EU	European Union
IFAD	International Fund for Agricultural Development
FDI	Foreign direct investment
FFV	Fresh fruits and vegetables
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GNP	Gross national product
G & S	Grades and standards
HACCP	Hazard analysis and critical control point
ICT	Information, communication and technology
ILO	International Labour Organization
IMF	International Monetary Fund
JSE	Johannesburg stock exchange
LSD	Least squares difference
MDG	Millennium development goals
METCASH	Metro cash and carry
METSEF	Metro Cash and Carry and Sefalana
NEPAD	The New Partnership for Africa's Development
OLS	Ordinary least squares
R	rand
RSA	Republic of South Africa
SA	South Africa
SACU	Southern African customs union
SADC	Southern African Development Community
SCM	Supply chain management
UHT	Ultra high temperature
UK	United Kingdom
US	United States
USD	United States dollar
WTO	World Trade Organization
ZATAC	Zambia agribusiness technical assistance centre